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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/090,321

03/04/2002

Rolf Wehrmann

Mo6978/LeA 33,682

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06/22/2004

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EXAMINER

STULTZ, JESSICA T

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/090,321

Applicant(s)

WEHRMANN ET AL.

Examiner

Jessica T Stultz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,3 and 6-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3 and 6-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0604.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically regarding claim 13, the phrase, "according to claim 5" is unclear because claim 5 was cancelled and claim 13 cannot depend from a cancelled claim. For purpose of examination, the assumed meaning is "according to claim 14".

### ***Claim Objections***

Claim 14 is objected to because of the following informalities: "in th presence of anions" should be changed to "in the presence of anions". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3, and 6-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broer et al in view of Tahon et al US Publication 2003/0038912, herein referred to as Tahon et al.

Regarding claim 14, Broer et al discloses a layer arrangement comprising: at least one transparent substrate having an electrically conductive layer (Sections 78, 157-158 and 258-259, wherein the transparent substrate is “2”, which is transparent when the laminate is transmissive and the electrically conductive layer is bottom electrodes “8a”, Figure 7b), an electro-optically active layer (Sections 81 and 157-159, wherein the electro-optically active layer is liquid crystal layer “4”, Figure 7b), an additional substrate having an electrically conductive layer (Sections 165-170 and 259-260, wherein the additional substrate is intermediate layer “14” and the electrically conductive layer comprises conductive electrodes “8b” and auxiliary electrodes “8c”, Figure 7b), wherein at least one of the two electrically conductive substrates is coated with an organic conductive polymer system based on polythiophenes (Sections 159-162, wherein the conductive electrodes “8c” are coated with an organic conductive polymer system based on polythiophenes, wherein the layer is electrode layer “8b”, Figure 7b), but does not specifically disclose that the organic conductive polymer system is a cationically charged polythiophene with the claimed structural units in a polyanion or anion. Tahon et al teaches of using polythiophene with the claimed structural units in a polyanion for the purpose of forming an alignment layer to align liquid crystals (Abstract and Sections 16-25, and 34-38). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the liquid crystal layer arrangement of Broer et al to further include the organic conductive polymer system is a cationically charged polythiophene with the claimed structural units in a polyanion or anion since Tahon et al teaches of using polythiophene with the claimed structural units in a polyanion for the purpose of forming an alignment layer to align liquid crystals.

Regarding claim 2, Broer et al and Tahon et al disclose and teach of a layer arrangement as shown above and Broer et al further discloses that the electrically conductive layer on the substrate comprises a metal oxide (Section 259, wherein the electrically conductive layer “8a” is disclosed as being ITO, indium tin oxide, Figure 7b).

Regarding claim 3, Broer et al and Tahon et al disclose and teach of a layer arrangement as shown above and it is inherent from Broer et al that the metal oxide is doped, this being reasonably based upon the fact that tin is doped onto indium oxide to make indium tin oxide (ITO).

Regarding claim 6, Broer et al and Tahon et al disclose and teach of a layer arrangement as shown above and Broer et al further discloses that the transparent substrate comprises glass (Section 259, wherein the substrate “2” is disclosed as a glass substrate).

Regarding claim 7, Broer et al and Tahon et al disclose and teach of a layer arrangement as shown above and Broer et al further discloses that the transparent substrate is made of plastic, wherein the plastic is polyimide (Sections 259, wherein the bottom substrate “2” is coated with a plastic alignment layer “12”, specifically polyimide).

Regarding claim 8, Broer et al and Tahon et al disclose and teach of a layer arrangement as shown above and Broer et al further discloses that both at least one of the substrates is plastic (Sections 259, wherein the bottom substrate “2” is coated with a plastic alignment layer “12”).

Regarding claim 9, Broer et al and Tahon et al disclose and teach of a layer arrangement as shown above and Broer et al further discloses that the substrate is made of plastic, wherein the plastic is polyimide (Sections 259, wherein the bottom substrate “2” is coated with a plastic alignment layer “12”, specifically polyimide).

Regarding claim 10, Broer et al and Tahon et al disclose and teach of a layer arrangement as shown above and Broer et al further discloses that the plastic substrate is provided with a scratch-resistant (Section 222, wherein the laminate has an additional scratch-resistant layer).

Regarding claim 11, Broer et al and Tahon et al disclose and teach of a layer arrangement as shown above and Broer et al further discloses that the electro-optically active layer is a liquid-crystal layer (Sections 81 and 157-159, wherein the electro-optically active layer is liquid crystal layer "4", Figure 7b).

Regarding claim 12, Broer et al and Tahon et al disclose and teach of a layer arrangement as shown above and Broer et al further discloses that the arrangement is encapsulated (Section 155, wherein the laminate is sandwiched together and therefore encapsulated into a layer arrangement).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broer et al in view of Tahon et al US Publication 2003/0038912, herein referred to as Tahon et al, and further in view of Blohm et al.

Regarding claim 13, Broer et al and Tahon et al disclose and teach of a layer arrangement as shown above and Tahon et al further teaches that the organic conductive polymer system is a cationically charged polythiophene made from a substituted oxy-alkylene-oxy bridged between the 3- and 4- positions (Abstract and Sections 40, wherein the polythiophene is synthesized by a bridge as disclosed in US Patent No. 5,111,327 Blohm et al), but does not specifically disclose that the polythiophene is made from the claimed structural units, either 1a-1 or 1b-1. However, Tahon et al further discloses that the polythiophenes can be synthesized by the method of Blohm et al (Tahon et al, Section 40) and Blohm et al teaches of synthesizing polythiophenes from a

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substituted oxy-alkylene-oxy bridged between the 3- and 4- positions and from the claimed structural units, specifically structure 1b-1 (Column 1, line 56-Column 2, line 68, wherein the polythiophene is made from the structure 1b-1, as shown in formula "5" of Blohm et al) for the purpose of obtaining polythiophenes with valuable conductive and optical properties (Column 1, line 56-Column 2, line 68). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the layer arrangement of Broer et al and Tahon et al to further include the cationically charged polythiophene to be made from a substituted oxy-alkylene-oxy bridged between the 3- and 4- positions and specifically from the claimed structural units since Blohm et al teaches of synthesizing polythiophenes from a substituted oxy-alkylene-oxy bridged between the 3- and 4- positions and from the claimed structural units for the purpose of obtaining polythiophenes with valuable conductive and optical properties.

### ***Response to Arguments***

Applicant's arguments with respect to claims 2-3 and 6-13 have been considered but are moot in view of the new ground(s) of rejection over Broer et al in view of newly cited references Tahon et al and Blohm et al. Therefore, the previous final rejection has been withdrawn. The previous indication of allowable subject matter of original claims 5 and 13 has been withdrawn due to the newly cited references Tahon et al and Blohm et al.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica T Stultz whose telephone number is (571) 272-2339. The examiner can normally be reached on M-F 8-4:30.

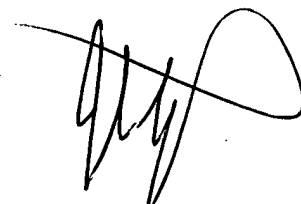
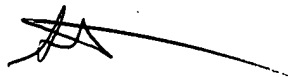
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jessica Stultz  
Patent Examiner  
AU 2873  
June 10, 2004



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